



ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA-R01-OAR-2017-0595; A-1-FRL-9984-00-Region 1]

Air Plan Approval; New Hampshire; Transport Element for the 2010 Sulfur Dioxide

National Ambient Air Quality Standard

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) is proposing to approve a State Implementation Plan (SIP) revision submitted by the State of New Hampshire. This revision addresses the interstate transport requirements of the Clean Air Act (CAA), referred to as the good neighbor provision, with respect to the 2010 sulfur dioxide (SO₂) national ambient air quality standard (NAAQS). This action proposes to approve New Hampshire's demonstration that the State is meeting its obligations regarding the transport of SO₂ emissions into other states.

DATES: Written comments must be received on or before **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA-R01-OAR-2017-0595 at <https://www.regulations.gov>, or via email to biton.leiran@epa.gov. For comments submitted at Regulations.gov, follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from Regulations.gov. For either manner of submission, EPA may publish any comment received to its public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the

official comment and should include discussion of all points you wish to make. EPA will generally not consider comments or comment contents located outside of the primary submission (i.e., on the web, cloud, or other file sharing system). For additional submission methods, please contact the person identified in the “For Further Information Contact” section. For the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit <https://www.epa.gov/dockets/commenting-epa-dockets>. Publicly available docket materials are available at <https://www.regulations.gov> or at the U.S. Environmental Protection Agency, EPA Region 1 Regional Office, Office of Ecosystem Protection, Air Permits, Toxics, and Indoor Programs Unit, 5 Post Office Square – Suite 100, Boston, MA. EPA requests that if at all possible, you contact the person listed in the **FOR FURTHER INFORMATION CONTACT** section to schedule your inspection. The Regional Office’s official hours of business are Monday through Friday, 8:30 a.m. to 4:30 p.m., excluding legal holidays.

FOR FURTHER INFORMATION CONTACT: Leiran Biton, Air Permits, Toxics and Indoor Programs Unit, U.S. Environmental Protection Agency, EPA Region 1, 5 Post Office Square - Suite 100, (Mail code OEP05-2), Boston, MA 02109 - 3912, tel. (617) 918-1267, email biton.leiran@epa.gov.

SUPPLEMENTARY INFORMATION: Throughout this document whenever “we,” “us,” or “our” is used, we mean EPA.

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I. Background and Purpose

On June 22, 2010 (75 FR 35520), EPA promulgated a revised primary NAAQS for SO₂ at a level of 75 parts per billion (ppb), based on a 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations. Pursuant to section 110(a)(1) of the CAA, states are required to submit SIPs meeting the applicable requirements of section 110(a)(2) within 3 years after promulgation of a new or revised NAAQS or within such shorter period as EPA may

prescribe.¹ These SIPs, which EPA has historically referred to as “infrastructure SIPs,” are to provide for the “implementation, maintenance, and enforcement” of such NAAQS, and the requirements are designed to ensure that the structural components of each state’s air quality management program are adequate to meet the state’s responsibility under the CAA. A detailed history, interpretation, and rationale of these SIPs and their requirements can be found, among other citations, in EPA’s May 13, 2014 (79 FR 27241) proposed rule titled, “Approval and Promulgation of Air Quality Implementation Plans; Illinois, Michigan, Minnesota, Wisconsin; Infrastructure SIP requirements for the 2008 Lead NAAQS” in the section, “What is the scope of this rulemaking?” Section 110(a) of the CAA imposes the obligation upon states to make a SIP submission to EPA for a new or revised NAAQS, but the contents of individual state submissions may vary depending upon the facts and circumstances, and may also vary depending upon what provisions the state’s approved SIP already contains.

EPA has implemented the 2010 SO₂ NAAQS in multiple stages or “rounds.” In our first round of implementation, EPA identified a monitored violation based on 2009-2011 monitoring data for an area around Merrimack Station, a coal-fired power plant in Bow, New Hampshire. Subsequently on August 5, 2013 (78 FR 47191), in concurrence with New Hampshire’s recommendation for the area, EPA established the Central New Hampshire Nonattainment Area for the 2010 SO₂ NAAQS. On January 31, 2017, EPA received a SIP submittal from the New Hampshire Department of Environmental Service (NHDES) for the Central New Hampshire Nonattainment Area. The central component of the plan is a set of new permit limitations on SO₂ emissions from Merrimack Station. On September 28, 2017 (82 FR 45242), EPA proposed to approve the State’s January 31, 2017 SIP submittal as meeting all applicable requirements for

¹ This requirement applies to both primary and secondary NAAQS, but EPA’s approval in this notice applies only to the 2010 primary NAAQS for SO₂ because EPA did not establish in 2010 a new secondary NAAQS for SO₂.

a nonattainment area SIP submittal. EPA issued a final rule approving New Hampshire's SIP submittal for the Central New Hampshire Nonattainment Area on June 5, 2018 (83 FR 25922). No other areas in New Hampshire or any neighboring state were designated for the 2010 SO₂ NAAQS in the first or second rounds of designations. All other areas in New Hampshire and neighboring states have since been designated as Attainment/Unclassifiable as part of EPA's third round of designations on January 9, 2018 (83 FR 1098).

On September 13, 2013, NHDES submitted a revision to its SIP, certifying its SIP meets most of the requirements of section 110(a)(2) of the CAA with respect to the 2010 SO₂ NAAQS. However, this submittal did not address the transport elements of CAA section 110(a)(2)(D)(i)(I). On July 8, 2016 (81 FR 44542) and May 25, 2017 (82 FR 24085), EPA approved NHDES's certification that its SIP was adequate to meet most of the program elements required by section 110(a)(2) of the CAA with respect to the 2010 SO₂ NAAQS. However, EPA did not take action related to the requirements of section 110(a)(2)(D)(i)(I) of the CAA because New Hampshire's September 13, 2013 infrastructure SIP submittal did not include provisions for this element.

On June 16, 2017, NHDES submitted a SIP revision for the transport elements of CAA section 110(a)(2)(D)(i)(I) for the 2010 primary SO₂ NAAQS. The title of the State's SIP submittal is "Amendment to New Hampshire 2010 Sulfur Dioxide NAAQS Infrastructure SIP to Address the Good Neighbor Requirements of Clean Air Act Section 110(a)(2)(D)(i)(I)." In this action, EPA is proposing to approve the State's June 16, 2017 submission to address the section 110(a)(2)(D)(i)(I) requirements for the 2010 SO₂ NAAQS.

EPA is soliciting public comments on the issues discussed in this notice or on other relevant matters. These comments will be considered before taking final action. Interested parties may

participate in the Federal rulemaking procedure by submitting written comments to this proposed rule by following the instructions listed in the **ADDRESSES** section of this **Federal Register**.

II. State Submittal

New Hampshire presented several facts in its SIP submittal on the effect of SO₂ emissions from sources within New Hampshire on both adjacent states' air quality and their ability to attain and remain in attainment with the 2010 SO₂ NAAQS. The SIP submittal notes that SO₂ ambient monitoring data within New Hampshire and in adjacent states were substantially below the 2010 SO₂ NAAQS. Specifically, the SIP submittal provided the SO₂ "design value" (DV),² i.e., the ambient concentration statistic appropriate for comparison with the NAAQS, for each monitoring site in New Hampshire, based on the 2013-2015 period. These 2013-2015 DVs were considerably below the NAAQS at all sites, including the two monitors within the Central New Hampshire Nonattainment Area during that period. The highest DV reported by NHDES for that period was 29 ppb, which is about 39% of the NAAQS, at the Peirce Island monitor in Portsmouth, New Hampshire. In addition, the submittal provided source-specific and county-level emissions trends information for 2013-2015 and longer-term statewide trends. Finally, the SIP submittal described air quality modeling information for Schiller Station, a coal- and biomass-fired power plant in Portsmouth, New Hampshire, and nearby Newington Station, an oil-fired power plant in Newington, New Hampshire, which indicated that emissions allowed under new, federally-enforceable emissions limits included in state air permits for those facilities would not result in a violation of the NAAQS in New Hampshire, Maine, or Massachusetts.

III. Summary of the Basis for the Proposed Action

² A DV is a statistic that describes the air quality status of a given location relative to the level of the NAAQS. The interpretation of the primary 2010 SO₂ NAAQS (set at 75 ppb) including the data handling conventions and calculations necessary for determining compliance with the NAAQS can be found in appendix T to 40 CFR part 50.

This proposed approval of New Hampshire's SIP addressing interstate transport of SO₂ is based on our assessment that the State is meeting its obligations regarding CAA section 110(a)(2)(D)(i)(I) relative to the 2010 SO₂ NAAQS.³ Interstate transport requirements for all NAAQS pollutants prohibit any source—or other type of emissions activity—in one state from emitting any air pollutant in amounts that will contribute significantly to nonattainment, or interfere with maintenance, of the NAAQS in another state. As part of this analysis, and as explained in detail below, EPA has taken several approaches to addressing interstate transport in other actions based on the characteristics of the pollutant, the interstate problem presented by emissions of that pollutant, the sources that emit the pollutant, and the information available to assess transport of that pollutant.

Despite being emitted from a similar universe of point and nonpoint sources, interstate transport of SO₂ is unlike the transport of fine particulate matter (PM_{2.5}) or ozone in that SO₂ is not a regionally-mixing pollutant for which emissions from multiple sources commonly contribute to widespread nonattainment of the SO₂ NAAQS over a large (and often multi-state) area. While transport of SO₂ is more analogous to the transport of lead (Pb) because its physical properties result in localized pollutant impacts very near the emissions source, the physical properties and release height of SO₂ are such that impacts of SO₂ do not experience the same sharp decrease in ambient concentrations as rapidly and as nearby as for Pb. Emissions of SO₂ travel further and have sufficiently wider-ranging impacts than emissions of Pb to require a

³ This proposed approval of New Hampshire's SIP under CAA section 110(a)(2)(D)(i)(I) is based on the information contained in the administrative record for this action, and does not prejudice any other future EPA action that may make other determinations regarding New Hampshire's air quality status. Any such future actions, such as area designations under any NAAQS, will be based on their own administrative records and EPA's analyses of information that becomes available at those times. Future available information may include, and is not limited to, monitoring data and information submitted to EPA by states, air agencies, and third party stakeholders such as citizen groups and industry representatives.

different approach than for handling Pb transport, but not far enough to be treated in a manner similar to regional transport pollutants such as PM_{2.5} or ozone.

Put simply, a different approach is needed for interstate transport of SO₂: the approaches EPA has adopted for Pb transport (described for background in section IV) are too tightly circumscribed to the source, and the approaches for PM_{2.5} or ozone transport (also described for background in section IV) are too regionally focused. SO₂ transport is therefore a unique case, and EPA's evaluation of whether New Hampshire has met its transport obligations was accomplished in several discrete steps. First, EPA evaluated what universe of sources are likely to be responsible for SO₂ emissions that could contribute to interstate transport. An assessment of the 2014 National Emissions Inventory (NEI) for New Hampshire made it clear that the vast majority of SO₂ emissions in New Hampshire are from fuel combustion at point and nonpoint sources and that emissions from other sources are small in the absolute sense as well, and therefore it would be reasonable to evaluate the downwind impacts of emissions from the combined fuel combustion source categories to help determine whether the State has met its transport obligations.

Second, EPA selected a spatial scale—essentially, the geographic area and distance around the point sources in which we could reasonably expect SO₂ impacts to occur—that would be appropriate for our analysis, ultimately settling on utilizing an “urban scale” with dimensions from 4 to 50 kilometers (km) from point sources given the usefulness of that range in assessing trends in both area-wide air quality and the effectiveness of pollution control strategies at those point sources. As such, EPA utilized an assessment approach that extended to 50 km from fuel-combustion point sources when considering possible transport of SO₂ from New Hampshire to downwind states.

Third, EPA assessed all available data at the time of this rulemaking regarding SO₂ emissions in New Hampshire and their possible impacts in downwind states, including: SO₂ ambient air quality; SO₂ emissions and SO₂ emissions trends; SIP-approved SO₂ regulations and permitting requirements; available air dispersion modeling; and other SIP-approved or federally promulgated regulations that may yield reductions of SO₂ at New Hampshire's fuel-combustion point and nonpoint sources.

Fourth, using the universe of information identified in steps 1-3 (i.e., emissions sources, spatial scale and available data, and modeling results and enforceable regulations), EPA then conducted an analysis under CAA section 110(a)(2)(D)(i)(I) to evaluate whether fuel-combustion sources in New Hampshire would significantly contribute to nonattainment in other states, and then whether they would interfere with maintenance of the NAAQS in other states.

Based on the analysis provided by the State in its SIP submittal and EPA's assessment of the information in that submittal, and EPA's assessment of other relevant information available at the time of this rulemaking, for each of the factors discussed at length below in this action, EPA proposes to find that sources or emissions activity within New Hampshire will not contribute significantly to nonattainment, nor will they interfere with maintenance of, the 2010 primary SO₂ NAAQS in any other state.

IV. Section 110(a)(2)(D)(i)(I)—Interstate Transport

A. General Requirements and Historical Approaches for Criteria Pollutants

Section 110(a)(2)(D)(i)(I) requires SIPs to include provisions prohibiting any source or other type of emissions activity in one state from emitting any air pollutant in amounts that will contribute significantly to nonattainment, or interfere with maintenance, of a NAAQS in another

state. The two clauses of this section are referred to as prong 1 (significant contribution to nonattainment) and prong 2 (interference with maintenance of a NAAQS).

EPA's most recent infrastructure SIP guidance, the September 13, 2013 memorandum, entitled "Guidance on Infrastructure State Implementation Plan (SIP) Elements under Clean Air Act Sections 110(a)(1) and 110(a)(2),"⁴ did not explicitly include criteria for how the Agency would evaluate infrastructure SIP submittals intended to address section 110(a)(2)(D)(i)(I).⁵ With respect to certain pollutants, such as particulate matter and ozone, EPA has addressed interstate transport in eastern states in the context of regional rulemaking actions that quantify state emission reduction obligations.⁶ In other actions, such as the EPA action on western state SIPs addressing particulate matter and ozone, EPA has considered a variety of factors on a case-by-case basis to determine whether emissions from one state significantly contribute to nonattainment or interfere with maintenance of the NAAQS in another state. In such actions, EPA has considered available information such as current air quality, emissions data and trends, meteorology, distance between states, and topography.⁷

⁴ Available online at: https://www.epa.gov/sites/production/files/2015-12/documents/guidance_on_infrastructure_sip_elements_multipollutant_final_sept_2013.pdf.

⁵ At the time the September 13, 2013 guidance was issued, EPA was litigating challenges raised with respect to our Cross State Air Pollution Rule (CSAPR), (76 FR 48208, August 8, 2011) designed to address the CAA section 110(a)(2)(D)(i)(I) interstate transport requirements with respect to the 1997 ozone and the 1997 and 2006 PM_{2.5} NAAQS. CSAPR was vacated and remanded by the D.C. Circuit in 2012 pursuant to *EME Homer City Generation, L.P. v. EPA*, 696 F.3d 7. EPA subsequently sought review of the D.C. Circuit's decision by the Supreme Court, which was granted in June 2013. As EPA was in the process of litigating the interpretation of section 110(a)(2)(D)(i)(I) at the time the infrastructure SIP guidance was issued, EPA did not issue guidance specific to that provision. The Supreme Court subsequently vacated the D.C. Circuit's decision and remanded the case to that court for further review. 134 S.Ct. 1584 (2014). On July 28, 2015, the D.C. Circuit issued a decision upholding CSAPR, but remanding certain elements for reconsideration. 795 F.3d 118.

⁶ NOx SIP Call (63 FR 57371, October 27, 1998); Clean Air Interstate Rule (CAIR) (70 FR 25172, May 12, 2005); CSAPR (76 FR 48208, August 8, 2011).

⁷ See, e.g., Approval and Promulgation of Implementation Plans; State of California; Regional Haze and Interstate Transport; Significant Contribution to Nonattainment and Interference with Maintenance Requirements, Proposed Rule (76 FR 14616, 14616-14626, March 17, 2011); Final Rule (76 FR 34872, June 15, 2011); Approval and Promulgation of State Implementation Plans; State of Colorado; Interstate Transport of Pollution for the 2006 24-Hour PM_{2.5} NAAQS, Proposed Rule (80 FR 27121, 27124-27125, May 12, 2015); Final Rule (80 FR 47862, August 10, 2015).

For Pb, EPA has suggested the applicable interstate transport requirements of section 110(a)(2)(D)(i)(I) can be met through a state's assessment as to whether emissions from Pb sources located in close proximity to its borders have emissions that impact a neighboring state such that they contribute significantly to nonattainment or interfere with maintenance in that state. For example, EPA noted in an October 14, 2011 memorandum, entitled "Guidance on Infrastructure State Implementation Plan (SIP) Elements Required Under Sections 110(a)(1) and 110(a)(2) for the 2008 Lead (Pb) National Ambient Air Quality Standards (NAAQS),"⁸ that the physical properties of Pb prevent its emissions from experiencing the same travel or formation phenomena as PM_{2.5} or ozone, and there is a sharp decrease in Pb concentrations, at least in the coarse fraction, as the distance from a Pb source increases. Accordingly, while it may be possible for a source in a state to emit Pb in a location and in quantities that may contribute significantly to nonattainment in, or interfere with maintenance by, any other state, EPA anticipates that this would be a rare situation, e.g., where large sources are in close proximity to state boundaries.⁹ Our rationale and explanation for approving the applicable interstate transport requirements under section 110(a)(2)(D)(i)(I) for the 2008 Pb NAAQS, consistent with EPA's interpretation of the October 14, 2011 guidance document, can be found, among other instances, in the May 13, 2014 proposed approval (79 FR 27241 and 27249) and a subsequent July 16, 2014 final approval (79 FR 41439) of interstate transport SIPs submitted by Illinois, Michigan, Minnesota, and Wisconsin.

B. Approach for Addressing the Interstate Transport Requirements for the 2010 Primary SO₂ NAAQS in New Hampshire

⁸ Available online at:

https://www3.epa.gov/ttn/naaqs/aqmguidance/collection/cp2/20111014_page_lead_caa_110_infrastructure_guidance.pdf.

⁹ Id. at pp 7–8.

As previously noted, section 110(a)(2)(D)(i)(I) requires an evaluation of how emissions from any source or other type of emissions activity in one state may impact air quality in other states. One reasonable starting point for determining which sources and emissions activities in New Hampshire are likely to impact downwind air quality with respect to the SO₂ NAAQS is by using information in the NEI.¹⁰ The NEI is a comprehensive and detailed estimate of air emissions of criteria pollutants, criteria pollutant precursors, and hazardous air pollutants from air emissions sources, and is updated every 3 years using information provided by the states. At the time of this rulemaking, the most recently available comprehensive dataset is the 2014 NEI (version 2), and the state summary for New Hampshire is included in Table 1 below.

Table 1: Summary of 2014 National Emissions Inventory Data for SO₂ Emission Source Categories in New Hampshire	
Category	Emissions (tons per year)
Fuel Combustion: Electric Generation	2,642
Fuel Combustion: Industrial	817
Fuel Combustion: Other*	4,440
Waste Disposal and Recycling	263
Highway Vehicles	134
Off-Highway	257
Miscellaneous [†]	6
Total	8,560

* “Other” fuel combustion is nonpoint and includes 3,180 tons per year from residential fuel oil combustion, 1,077 tons per year from commercial/institutional fuel oil combustion, and 182 tons per year from combustion of other fuel types from residential and commercial/institutional sources.

[†] Miscellaneous includes prescribed fires, wildfires, and non-combustion industrial emissions.

EPA observes that according to the 2014 NEI, the vast majority of SO₂ emissions (7,900 tons of 8,560 tons overall, or 92.3%) in New Hampshire originate from fuel combustion at point and

¹⁰ Available online at: <https://www.epa.gov/air-emissions-inventories/national-emissions-inventory-nei>.

nonpoint stationary sources. The emissions from other categories (waste disposal and recycling, mobile sources, and miscellaneous) are also small in an absolute sense, and widely distributed rather than concentrated at a few release points; accordingly, these categories are not further addressed in this notice. Therefore, an assessment of New Hampshire's satisfaction of all applicable requirements under section 110(a)(2)(D)(i)(I) of the CAA for the 2010 SO₂ NAAQS may be reasonably based upon evaluating the downwind impacts of emissions from the combined fuel combustion categories (i.e., electric utilities, industrial, and other¹¹ combustion sources).

Fuel-combustion units in residences and commercial/institutional facilities are considered nonpoint sources. Although SO₂ emissions from residential and commercial/institutional fuel oil combustion accounted for 50% of all 2014 SO₂ emissions in the NEI for New Hampshire, SO₂ emissions from these nonpoint sources are now much lower due to a provision of state law, RSA 125 C:10-d. As of July 2018, fuel oil sold in the State is subject to stricter fuel sulfur limits, and New Hampshire plans to incorporate these limits into the state regulations Env-1600, entitled "Fuel Specifications." The new limit for number 2 home heating oil of 0.0015% by weight will achieve a 98.5% reduction in residential fuel combustion emissions compared to emissions under the limit of 0.4% that applied in 2014. Because residential fuel combustion in 2014 was about 75% of all nonpoint fuel combustion, this means that the reduction in all nonpoint fuel combustion will be around 75% even with considering an expected decline in commercial/institutional emissions. However, commercial/institutional emissions will also decline because of the new limits on fuel oil sulfur content of 0.25% by weight for number 4 oil (compared to a 2014 limit of 1%), and 0.5% by weight for numbers 5 and 6 oils (compared to

¹¹ As indicated in the notes for Table 1, the "other" category of fuel combustion in New Hampshire is comprised mostly of residential heating through fuel oil combustion.

2014 limits ranging between 2% and 2.2% depending on county). Also, the diffuse nature of emissions from these nonpoint sources makes it unlikely that the current and future emissions from nonpoint combustion of fuel oil in New Hampshire will contribute to an exceedance of the NAAQS in a neighboring state. Based on this reasoning, EPA concludes that these nonpoint sources are not significantly contributing to nonattainment or interfering with maintenance in another state. Accordingly, we do not further address nonpoint fuel combustion sources in this notice.

Regarding the evaluation of impacts from fuel combustion by point sources (electrical generation and industrial sources), the definitions contained in appendix D to 40 CFR part 58 entitled “Sulfur Dioxide (SO₂) Design Criteria” are helpful indicators of the transport and fate of SO₂ originating from stationary sources in the context of the 2010 primary SO₂ NAAQS. Notably, section 4.4 of this appendix provides definitions for SO₂ spatial scales for middle scale and neighborhood scale monitors. The middle scale generally represents air quality levels in areas 100 meters to 500 meters from a facility, and may include locations of maximum expected short-term concentrations due to proximity of major SO₂ point, nonpoint, and non-road sources. The neighborhood scale characterizes air quality conditions between 500 meters and 4 km from a facility; emissions from stationary point sources may under certain plume conditions result in high SO₂ concentrations at this scale. Based on these definitions, we conclude that it is appropriate to examine the impacts of emissions from electric utilities and industrial processes in New Hampshire at locations that are up to 50 km from an emitting facility. In other words, SO₂ emissions from stationary point sources in the context of the 2010 primary SO₂ NAAQS do not exhibit the same long-distance travel, regional transport, or formation phenomena as either PM_{2.5} or ozone; rather, these emissions behave more like Pb with localized dispersion. Therefore, an

assessment of point fuel combustion sources within 50 km of a border between New Hampshire and an adjacent state would be useful for assessing whether sources in New Hampshire significantly contribute to nonattainment or interfere with maintenance in the adjacent state.¹²

Our current implementation strategy for the 2010 primary SO₂ NAAQS includes the flexibility to characterize air quality for stationary point sources via either data collected at ambient air quality monitors sited to capture the points of maximum concentration, or air dispersion modeling.¹³ Our assessment of SO₂ emissions from fuel combustion point sources in New Hampshire and their potential impact on neighboring states is informed by all available data at the time of this rulemaking, specifically: SO₂ ambient air quality; SO₂ emissions and SO₂ emissions trends; SIP-approved SO₂ regulations and permitting requirements; available air dispersion modeling; and, other SIP-approved or federally promulgated regulations which may limit emissions of SO₂. This notice describes EPA's evaluation of New Hampshire's June 16, 2017 SIP submittal of the transport infrastructure elements of the CAA for the 2010 primary SO₂ NAAQS to satisfy the requirements of CAA section 110(a)(2)(D)(i)(I).¹⁴

C. Prong 1 Analysis—Significant Contribution to Nonattainment

Prong 1 of the good neighbor provision requires state plans to prohibit emissions that will contribute significantly to nonattainment of a NAAQS in another state. EPA proposes to find that New Hampshire's SIP meets the interstate transport requirements of CAA section

¹² EPA recognizes in section A.1 of appendix A to EPA's *Guideline on Air Quality Models* ("the *Guideline*"), i.e., 40 CFR 51, appendix W, that EPA's regulatory AERMOD model is appropriate for predicting pollutant concentrations up to 50 km. Section 4.1 of the *Guideline on Air Quality Models* also suggests that 50 km is the maximum distance for which such models should be applied.

¹³ See the EPA April 23, 2014 memorandum (EPA 2014) entitled "Guidance for 1-Hour SO₂ Nonattainment Area SIP Submissions," available online at: https://www.epa.gov/sites/production/files/2016-06/documents/20140423guidance_nonattainment_sip.pdf (hereafter, "EPA's April 2014 guidance").

¹⁴ EPA notes that the evaluation of other states' satisfaction of section 110(a)(2)(D)(i)(I) for the 2010 SO₂ NAAQS can be informed by similar factors found in this proposed rulemaking, but may not be identical to the approach taken in this or any future rulemaking for New Hampshire, depending on available information and state-specific circumstances.

110(a)(2)(D)(i)(I), prong 1 for the 2010 SO₂ NAAQS, as discussed below. In order to evaluate New Hampshire's satisfaction of prong 1, EPA evaluated the State's SIP submittal with respect to the following five factors: (1) SO₂ emissions information and trends for New Hampshire and neighboring states, i.e., Maine, Massachusetts, and Vermont; (2) SO₂ ambient air quality; (3) potential ambient impacts of SO₂ emissions from certain facilities in New Hampshire (identified as being of interest from a transport perspective as part of our evaluation of SO₂ emissions trends) on neighboring states based on available air dispersion modeling results and other information; (4) SIP-approved regulations specific to SO₂ emissions; and (5) other SIP-approved or federally-enforceable regulations that, while not directly intended to address or reduce SO₂ emissions, may limit emissions of the pollutant. A discussion of each of these factors is provided below. In this evaluation, EPA did not identify any current air quality problems in nearby areas in the adjacent states relative to the 2010 SO₂ NAAQS, and we propose to find that New Hampshire will not significantly contribute to nonattainment of the 2010 SO₂ NAAQS in any other state.

1. Emissions Trends

As part of the SIP submittal, New Hampshire indicated that for the 2013-2015 period, no sources emitted greater than 2,000 tons per year (tpy), which the State noted was the threshold established in the August 21, 2015 (80 FR 51052) SO₂ Data Requirements Rule (DRR), above which sources were required to be characterized. Further, the State provided an inventory of individual point sources in New Hampshire with emissions greater than 10 tpy, and total county point source emissions from 2013-2015. These emissions are presented in Tables 2 and 3, below.

Table 2: SO₂ Point Source Emissions in Tons per Year (tpy) for 2013-2015 for New Hampshire Facilities with Emissions in Any Single Year for 2013-2015 Exceeding 10 tpy, as Provided in the State's SIP Submittal

County	Facility Name	2013 Emissions	2014 Emissions	2015 Emissions
Belknap	Tilton School	0.0	3.3	11.7
Cheshire	Cheshire Medical Center	13.8	9.3	0.2
Cheshire	Keene State College	30.9	33.1	34.0
Cheshire	Markem Corporation	17.6	5.8	5.8
Cheshire	The Cheshire Medical Center	13.8	9.3	0.2
Coos	Burgess Biopower LLC	1.6	11.5	14.6
Coos	Fraser NH LLC	28.8	29.4	26.2
Coos	Mount Carberry Landfill	20.1	13.1	6.6
Coos	Mount Washington Hotel	15.5	14.2	14.4
Grafton	Dartmouth College	241.7	245.6	241.1
Grafton	Dartmouth-Hitchcock Medical Center	124.6	16.7	2.8
Grafton	Freudenberg-Nok General Partnership-Bristol	34.1	23.3	4.1
Grafton	North Country Environmental Services Inc	42.9	33.1	50.2
Grafton	Plymouth State University	28.1	15.2	0.6
Grafton	Unifirst Corporation	12.2	11.1	12.4
Hillsborough	Four Hills Landfill	14.4	11.1	4.3
Hillsborough	Monadnock Paper Mill	156.1	147.9	80.4
Hillsborough	Nylon Corporation	2.3	13.7	0.0
Hillsborough	Warwick Mills Inc	12.6	5.8	1.1
Merrimack	Environmental Soils Management Inc	9.8	16.0	10.9
Merrimack	Public Service of New Hampshire (PSNH) - Merrimack Station	1,401.4	1,044.0	636.0
Merrimack	Wheelabrator Concord Company LP	52.2	56.6	50.9
Rockingham	Granite Ridge Energy LLC	7.7	7.8	10.1
Rockingham	New NGC d/b/a National Gypsum Company	15.3	16.0	17.0
Rockingham	PSNH - Newington Station	330.6	316.1	294.8
Rockingham	PSNH - Schiller Station	1,428.1	1,243.2	856.8
Strafford	Turnkey Recycling & Environmental Enterprises	31.7	56.3	30.4
Strafford	University of New Hampshire – Durham	12.7	18.7	15.7
Sullivan	APC Paper Company	30.3	13.6*	2.1
Sullivan	Wheelabrator Claremont Company LP	17.0	0.0	0.0

* The 2014 NEI reports emissions of 153.1 tpy for APC Paper Company.

Table 3: SO₂ Total Point Source Emissions in Tons per Year (tpy) for 2013-2015 for New Hampshire Counties with Emissions in Any Single Year for 2013-2015 Exceeding 10 tpy,

as Provided in the State's SIP Submittal			
County	2013 Emissions	2014 Emissions	2015 Emissions
Belknap	6.2	3.6	12.0
Carroll	14.3	13.8	9.4
Cheshire	99.1	79.6	64.2
Coos	75.5	74.1	66.2
Grafton	514.2	370.5	331.1
Hillsborough	220.1	201.7	107.8
Merrimack	1,484.8	1,138.2	713.7
Rockingham	1,797.4	1,597.8	1,191.8
Strafford	58.5	91.8	57.5
Sullivan	49.5	16.2	4.7
TOTAL	4,319.5	3,587.3	2,558.6

Table 3 indicates that total SO₂ emissions from point sources in the 10 listed counties have decreased by 1,761 tpy, or about 41%, over the time period from 2013 to 2015. However, as stated above, our focus when reviewing New Hampshire's submittal is on sources within 50 km of the border with another state, not on county-wide or state-wide emissions.

Six facilities listed in Table 2 have emissions greater than 100 tpy and are within 50 km of a border between New Hampshire and another state. Three of these are electric generating stations: Schiller Station, Merrimack Station, and Newington Station. In particular, Schiller Station and Newington Station are within 1 km of one another and within 0.5 km of the New Hampshire-Maine border. These electric generating facilities were the three highest point source emitters in each of the 3 years in New Hampshire. The combined changes in emissions from these three sources account for 78% of the total decrease in point source emissions during this period. Specifically, based on the information presented in Table 2, combined SO₂ emissions from Schiller Station, Merrimack Station, and Newington Station were 3,160 tpy in 2013 compared to 1,788 tpy in 2015, a net decrease of 1,373 tpy.

The three other major fuel combustion point sources (i.e., sources with emissions higher than 100 tpy) in New Hampshire listed in Table 2 that are within 50 km of the state border are

Monadnock Paper Mills Inc. in Bennington in Hillsborough County (147.9 tpy – 33 km from Massachusetts, 42 km from Vermont), APC Paper Company Inc. in Claremont in Sullivan County (153.1 tpy – 4 km from Vermont), and Dartmouth College in Hanover in Grafton County (245.6 tpy – 1 km from Vermont). These three sources are discussed in greater detail in section IV.C.3 of this notice. While Table 2 provides information on SO₂ emissions between 2013 and 2015 for the highest emitting sources based on the State's point source inventory, an emissions summary for all electric utilities within the State subject to the Federal Acid Rain Program provides more current information on statewide SO₂ emissions from all electric utilities. Data for this purpose can be found in the most recent EPA Air Markets Program Data (AMPD).¹⁵ The AMPD is an application that provides both current and historical data collected as part of EPA's emissions trading programs. A summary of all 2016 and 2017 SO₂ emissions from electric utilities in New Hampshire subject to the Acid Rain Program is below.

Table 4: 2016 and 2017 AMPD data for all New Hampshire electric utilities in tons per year (tpy)			
County	Facility Name	2016 SO₂ Emissions (tpy)	2017 SO₂ Emissions (tpy)
Coos	Burgess BioPower	21.5	15.4
Rockingham	Granite Ridge Energy	7.3	5.9
Merrimack	Merrimack Station	228.2	143.6
Rockingham	Newington Station	40.6	41.3
Rockingham	Newington Energy*	2.9	4.3
Rockingham	Schiller Station	272.3	262.6
Total		572.7	473.1

* In 2013 to 2015, Newington Energy had emissions below the State's 10 tpy threshold for the inventory of individual point sources shown in Table 2.

¹⁵ Available online at: <https://ampd.epa.gov/ampd/>.

Table 4 provides two key pieces of information. First, SO₂ emissions have generally continued to decrease in 2016 and 2017 for Schiller Station, Merrimack Station, and Newington Station since the State's SIP submittal which analyzed 2013 through 2015 emissions. Second, aggregate SO₂ emissions for New Hampshire facilities reporting to AMPD have continued to decrease.

In addition to the emissions information for New Hampshire sources provided by the State, EPA also compiled 2014 NEI information for major sources in the adjacent states within 50 km of the New Hampshire border. This information, presented in Table 5 below, indicates that major sources in neighboring states near the New Hampshire border are distant from most sources in New Hampshire. (Note that there are no major SO₂ sources in Vermont within 50 km of the New Hampshire border based on the 2014 NEI data.) Based on these 2014 data, the only source in New Hampshire (Mount Carberry Landfill in Berlin, New Hampshire) that is within 50 km of a major source (i.e., a source emitting greater than 100 tpy) in a neighboring state (Catalyst Paper Operators in Richmond, Maine) emitted around 13 tpy and is at a distance of 49 km. Furthermore, there are relatively few major SO₂ sources in nearby states. This information supports the conclusion that New Hampshire sources within 50 km of a border and emitting below 100 tpy, and thus not including the six major sources already identified, are unlikely to contribute to nonattainment in neighboring states, confirming our focus on the six identified major sources.

Table 5: Summary of SO₂ major point sources within 50 km of the New Hampshire border and potential interactive New Hampshire sources			
State	Source	2014 Emissions (tpy)	Sources in New Hampshire within 50 km

Massachusetts	Mystic Station - Boston	910	None
Massachusetts	Logan Airport - Boston	222	None
Massachusetts	Veolia Energy Boston LLC - Boston	115	None
Maine	Catalyst Paper Operators - Richmond	824	Mount Carberry Landfill - Berlin (13 tpy, 49 km)

Data retrieved from 2014 NEI.

2. Ambient Air Quality

Data collected at ambient air quality monitors indicate the monitored values of SO₂ in the State have remained below the NAAQS since at least 2013. New Hampshire included DVs for 2013-2015 in its SIP submittal. EPA compiled relevant data from Air Quality System (AQS) DV reports for this period and three additional 3-year periods at New Hampshire SO₂ monitoring stations; this information is summarized in Table 6 below.¹⁶

Table 6: Trend in SO₂ Design Values for AQS Monitors in New Hampshire					
AQS Monitor Site	Monitor Location	2012-2014 DV (ppb)	2013-2015 DV (ppb)	2014-2016 DV (ppb)	2015-2017 DV (ppb)
33-013-1007	Concord – Hazen Drive	9	8	7	NA*
33-015-0018	Londonderry – 150 Pillsbury Road	5	6	5	4
33-013-1006	Pembroke – Pleasant Street	23	20	20	15
33-011-5001	Peterborough – Pack Monadnock Summit	5	5	3	3
33-015-0014	Portsmouth – Peirce Island	28	29	22	16

* The DV for this site is invalid due to incomplete data for this period and is not for use in comparison to the NAAQS.

¹⁶ Available online at: <https://www.epa.gov/air-trends/air-quality-design-values>.

As shown in Table 6 above, the DVs for the periods from 2012-2014 through 2015-2017 show overall decreases in SO₂ concentrations. The highest DV in New Hampshire for 2015-2017 is 16 ppb, which is well below the NAAQS, at the Peirce Island monitor in Portsmouth very close to the border with Maine. An analysis of DV data from these monitors, along with additional data sources (as further discussed below), can partially inform the evaluation of SO₂ transport from New Hampshire.

Table 7: Distances Between the Largest SO₂ Emission Sources in New Hampshire and Regulatory Monitors						
Facility	Closest AQS monitor in New Hampshire	Distance to closest AQS monitor in New Hampshire (km)	Spatial Scale	2013-2015 DV (ppb)	2014-2016 DV (ppb)	2015-2017 DV (ppb)
Schiller Station	Portsmouth – Peirce Island	3.9	Neighborhood	29	22	16
Newington Station	Portsmouth – Peirce Island	4.4	Neighborhood	29	22	16
Merrimack Station	Pembroke – Pleasant Street	1.3	Neighborhood	20	20	15

The monitors closest to Merrimack Station (i.e., the Pembroke monitor, AQS no. 33-013-1006) and both Schiller Station and Newington Station (i.e., the Peirce Island monitor, AQS no. 33-015-0014) may not be sited in the area to adequately capture points of maximum concentration from the facilities. However, Table 7 indicates that these monitors are located in the neighborhood spatial scale in relation to the facilities, i.e., emissions from stationary and point sources may under certain plume conditions result in high SO₂ concentrations at this scale. EPA's monitoring regulations at 40 CFR part 58, appendix D, section 4.4.4(3) define

neighborhood scale as “characterize[ing] air quality conditions throughout some relatively uniform land use areas with dimensions in the 0.5 to 4.0 km range.” The Pembroke monitor has, in prior years, recorded SO₂ levels in excess of the 2010 SO₂ NAAQS resulting from emissions from Merrimack Station. For example, the DV at the Pembroke monitor was 221 ppb for the 2009-2011 monitoring period. Similarly, the Peirce Island monitor has recorded 1-hour SO₂ concentrations higher than the level of the 2010 SO₂ NAAQS in prior years, with peak 1-hour impacts in 2006 of 93 ppb and a DV of 60 ppb during the 2005-2007 period, reflecting previous impacts from emissions from Schiller Station and Newington Station. These historic values illustrate the extent to which the Pembroke and Peirce Island monitors were capable of recording high pollutant levels resulting from emissions from Merrimack Station and Schiller and Newington Stations, respectively. However, these three facilities are no longer expected to emit at high levels because each is subject to federally-enforceable requirements that limit allowable SO₂ emissions. Therefore, EPA no longer expects high SO₂ readings at the Pembroke and Peirce Island monitors. As presented in Table 7, the most recently available DVs at both monitors are now well below the NAAQS based on 2013-2015 data included in the State’s SIP submittal and on updated DV data reviewed by EPA.

However, the absence of a violating ambient air quality monitor within the State is insufficient to demonstrate that New Hampshire has met its interstate transport obligation. While the very low DVs and the spatial relationship between the sources of interest and two of the monitoring sites support the notion that emissions originating within New Hampshire are not contributing to a violation of the NAAQS, prong 1 of section 110(a)(2)(D)(i)(I) specifically addresses the effects that sources within New Hampshire have on air quality in neighboring states. Therefore, the evaluation and analysis of SO₂ emissions data from facilities within the

State, as previously presented, together with ambient data in neighboring states, as will be presented next, is appropriate.

In its SIP submittal, New Hampshire provided 2013-2015 SO₂ DVs for all monitors in neighboring states, noting that two such monitors reside in counties adjacent to New Hampshire, and also that there are currently no designated nonattainment or maintenance areas for the 2010 SO₂ NAAQS in states surrounding New Hampshire. Table 8 contains the 2013-2015 through 2015-2017 SO₂ DVs for monitors in the three states neighboring New Hampshire, i.e., Maine, Massachusetts, and Vermont, also noting whether the county is adjacent to New Hampshire. (The State supplied the 2013-2015 DVs in its SIP submittal, and EPA updated the State's analysis to include the 2014-2016 and 2015-2017 SO₂ DVs for these monitors.) Several monitors in this dataset have incomplete data for at least one of the DV periods; DVs are reported as "NA" for periods with incomplete data. All of the valid DVs for the monitoring sites listed in Table 8 are well below the NAAQS.

One monitor with a DV listed as "NA" for the relevant time periods included in the State's SIP submittal is the Sawgrass Lane monitor, AQS site 23-031-0009, located in Eliot, Maine. The Sawgrass Lane monitor collected SO₂ concentration data from October 24, 2014 to April 1, 2016. The maximum 1-hour SO₂ concentration observed from this monitor was 37.7 ppb on January 8, 2015, when winds came from the direction of Schiller Station and the power plant was operating at near-maximum capacity.¹⁷ Though a single maximum 1-hour concentration is not

¹⁷ The Town of Eliot had previously submitted a petition to EPA in August 2013 pursuant to section 126 of the CAA regarding alleged violations of the 2010 SO₂ NAAQS within the Town's political boundary due to emissions from Schiller Station. The Sawgrass Lane monitor was sited in an area expected to experience peak SO₂ impacts based on modeling information submitted by the Town with the section 126 petition. On November 9, 2017, following the Sawgrass Lane monitoring study, and in light of new permit limitations on SO₂ emissions at Schiller Station (described in section IV.C.3.a) and EPA's August 22, 2017 letters stating EPA's intention to designate the Maine and New Hampshire seacoast areas as not being in violation of the NAAQS, the Town of Eliot withdrew its August 2013 section 126 petition. Additional background and results of the Sawgrass Lane monitoring study are

directly comparable to the SO₂ NAAQS, which is in the form of the 3-year average of the 99th percentile of daily maximum 1-hour values, EPA notes that the highest concentration observed at the Sawgrass Lane monitor was approximately 50% of the level of the NAAQS,

Based on the monitoring data in neighboring states, EPA proposes to conclude that these monitoring data do not provide evidence of violations in the neighboring states.

described in the report, “Review of 2014-2016 Eliot, Maine Air Quality Monitoring Study,” EPA, the Maine Department of Environmental Protection, and NHDES (September 2016).

Table 8: SO₂ DVs for AQS monitors in neighboring states and adjacency to New Hampshire of the county in which monitor is located

State	AQS Monitor Site	Monitor Location	2013-2015 SO ₂ DV (ppb)	2014-2016 SO ₂ DV (ppb)	2015-2017 SO ₂ DV (ppb)	County Adjacent to New Hampshire?
Maine	23-003-1100	Presque Isle	3	3	NA*	No
	23-005-0029	State Street, Portland	12	11	9	No
	23-009-0103	Hancock County	2	1	1	No
	23-011-2005	Pray Street, Gardiner	12	NA*	NA*	No
	23-031-0009	Sawgrass Lane, Eliot	NA*	NA*	NA*	Yes
Massachusetts	25-005-1004	Globe Street, Fall River	28	10	9	No
	25-013-0016	Liberty Street, Springfield	8	NA*	NA*	No
	25-015-4002	Quabbin Summit, Ware	5	4	3	No
	25-025-0002	Kenmore Square, Boston	9	6	4	No
	25-025-0042	Dudley Square, Roxbury	11	9	6	No
	25-027-0023	Summer Street, Worcester	7	6	5	Yes
Vermont	50-007-0007	Harvey Road, Underhill	3 [†]	2	2	No
	50-021-0002	State Street, Rutland	9	6	2	No

* The DV for this site is invalid due to incomplete data for this period and is not for use in comparison to the NAAQS.

[†] Value as reported by NH DES. EPA's AQS database indicates no valid DV at this monitor for this year range.

3. Assessment of Potential Ambient Impacts of SO₂ Emissions from Certain Sources Based on Air Dispersion Modeling and Other Information

Schiller Station, Newington Station, and Merrimack Station

In its SIP submittal, New Hampshire referenced air dispersion modeling conducted for Schiller Station and Newington Station used to support the State's recommendation for designations under the 2010 SO₂ NAAQS and to meet the State's obligation under the SO₂ DRR. The State used the modeling to establish maximum allowable SO₂ emission limits for Schiller Station in the June 15, 2017 Title V Operating Permit (TV-0053) and for Newington Station in the December 22, 2016 temporary permit TP-0197. A detailed description of EPA's assessment of the modeling, and associated visualizations, are available in Chapter 27 of the Technical Support Document for EPA's September 5, 2017 (82 FR 41903) Intended Round 3 Area Designations for the 2010 1-Hour SO₂ Primary National Ambient Air Quality Standard for New Hampshire, and this description is hereby incorporated for purposes of this action.¹⁸ EPA's assessment of the State's modeling indicates that it is suitable for use in evaluating impacts in Maine and Massachusetts from the allowable emissions from Schiller Station and Newington Station under federally-enforceable emission limits for those facilities. The modeling also included representative actual emissions from nearby sources. The maximum predicted concentrations, which are at a level of 74.8 ppb, in the State's modeling based on full load using maximum allowable emissions are located in Eliot, Maine. The modeling also predicted SO₂ concentrations in areas of northeast Massachusetts, where levels were predicted to be around 24 ppb. Based on our assessment of this modeling information, EPA proposes to conclude that the

¹⁸ In referencing EPA's Intended Round 3 Area Designations, EPA is not reopening the SO₂ area designations action nor incorporating any other materials from those designations into the record for this proposal other than those explicitly described as incorporated. A notice of the final rule for these designations was published on January 9, 2018 (83 FR 1098). Chapter 27 of the Technical Support Document can be found at https://www.epa.gov/sites/production/files/2017-08/documents/27_nh_so2_rd3-final.pdf.

federally-enforceable emissions limits for Schiller Station and Newington Station ensure that emissions activity from these sources will not contribute significantly to nonattainment of the SO₂ NAAQS in Maine or Massachusetts.

The State also referenced air dispersion modeling conducted to establish federally-enforceable SO₂ emission limits for Merrimack Station in Bow, New Hampshire. The State relied upon these limits with supporting modeling analysis in the attainment demonstration for the Central New Hampshire SO₂ Nonattainment Area, as described in the Federal Register on September 28, 2017 (82 FR 45242).¹⁹ Merrimack Station was explicitly modeled in this attainment demonstration, while Schiller Station and Newington Station were represented by the selected background concentration. EPA's assessment of the State's modeling indicates that it is suitable for use in evaluating impacts in Maine and Massachusetts under federally-enforceable emission limits from Merrimack Station. The modeling predicted maximum impacts from Merrimack Station of around 11 ppb in Maine and Massachusetts. Based on our assessment of this modeling information, EPA proposes to conclude that the federally-enforceable emissions limits for Merrimack Station ensure emissions activity from this source will not contribute significantly to nonattainment of the SO₂ NAAQS in Maine or Massachusetts.

The modeling results demonstrate that the points, outside of New Hampshire, of maximum potential impact for Merrimack Station, Schiller Station, and Newington Station are located in Maine, which neighbors New Hampshire to the east, and that these impacts are below the level of the 2010 SO₂ NAAQS. Therefore, EPA expects the actual impacts will be no higher than the potential impacts shown in the State's analysis.

¹⁹ In referencing EPA's approval of New Hampshire's plan and attainment demonstration for the Central New Hampshire Nonattainment Area, EPA is not reopening the nonattainment area plan approval action. A notice of the final rule for the plan approval was published on June 5, 2018 (83 FR 25922).

To additionally evaluate the expectation that Schiller Station, Newington Station, and Merrimack Station will not contribute significantly to nonattainment of the SO₂ NAAQS in Maine or Massachusetts, EPA assessed the proximity of these facilities to major SO₂ emission sources in neighboring states that may cause areas of higher concentration in those states. To do so, EPA examined emissions data for major sources of SO₂ emissions in Maine and Massachusetts. (There are no major sources in Vermont within 50 km of the New Hampshire border, so Vermont was excluded this portion of the analysis.²⁰) A summary of this information, as it relates to the sources in New Hampshire discussed here, is presented in Table 9 below. Based on the information in Table 9, the distance between the sources modeled by New Hampshire and major sources in nearby states are at least 73 km. Therefore, the large distances between Merrimack Station, Schiller Station, and Newington Station and the nearest major SO₂ sources within Maine, Massachusetts, and Vermont, indicate that impacts from New Hampshire are appropriately characterized by the State's modeling, and are very unlikely to contribute significantly to problems with attainment of the 2010 SO₂ NAAQS in these neighboring states.

²⁰ EPA notes that according to the 2014 NEI, Agrimark Inc. in Middlebury, Vermont, at about 79 km from the New Hampshire border, 168 km from Merrimack Station, and 220 km from Shiller Station and Newington Station, is the nearest major SO₂ source in Vermont to the New Hampshire border and the major sources in New Hampshire.

Table 9: Summary of Major Emission Sources in States Adjacent to New Hampshire and Their Corresponding Distance to Merrimack Station, Newington Station, and Schiller Station

New Hampshire source	2017 emissions (tpy)*	Distance to New Hampshire-Massachusetts Border (km)	Distance to New Hampshire-Maine Border (km)	Distance to nearest neighboring state major SO₂ source (km)	Neighboring state source 2014 emissions (tpy)
Merrimack Station	143.6	44	46	89 (Mystic Station in Boston, Mass.)	910.4
Newington Station	41.3	25	<1	73 (S D Warren Co in Westbrook, Maine)	426.8
Schiller Station	262.6	25	<1	73 (S D Warren Co in Westbrook, Maine)	426.8

* CAMD data for 2017; see Table 4.

† Data retrieved from 2014 NEI.

Based on the modeling provided by New Hampshire and the reasoning presented above, EPA proposes to conclude that SO₂ emissions from Merrimack Station, Schiller Station, and Newington Station do not have the potential to violate the 2010 SO₂ NAAQS based on currently effective and federally-enforceable permit conditions.

Monadnock Paper Mills Inc., APC Paper Company Inc., and Dartmouth College

Regarding Monadnock Paper Mills, APC Paper Company Inc, and Dartmouth College, EPA does not have information at this time suggesting that either Massachusetts or Vermont is impacted by emissions from these sources or other emissions activity originating in New Hampshire in violation of section 110(a)(2)(D)(i)(I). EPA reviewed available information to assess whether these sources may result in such a violation. Specifically, as described below,

EPA examined wind rose information, distances from state borders and from major sources in the adjacent states (if any), and the relative emission levels of these three sources.

EPA examined wind roses for meteorological stations representative of the areas around these three other major sources in New Hampshire, i.e., Monadnock Paper Mills Inc., APC Paper Company Inc., and Dartmouth College.²¹ For the meteorological stations nearest to Monadnock Paper Mills Inc. and APC Paper Company Inc., the wind roses indicate the predominant winds to be away from the state border, as opposed to toward the state border which would be conducive to interstate transport. For Dartmouth College, the wind rose for a nearby meteorological station indicates a prevailing north-south wind pattern, i.e., along the state border with Vermont, as opposed to an east-west pattern that would be most conducive to interstate transport.

Additionally, EPA also notes that there are no major SO₂ sources in the adjacent states within 50 km of these three New Hampshire sources, which indicates that there are unlikely to be high SO₂ concentrations in the adjacent state arising mostly from in-state sources to which these three New Hampshire sources are contributing. Furthermore, Monadnock Paper Mills Inc. is located approximately 30 km from the nearest state border, which indicates that the likelihood of high impacts in another state is extremely low. Finally, all three of these sources are in the range of 100-250 tpy, indicating that these sources have emissions only slightly above the threshold of 100 tpy used by EPA to identify sources for additional analysis. Based on this information, EPA is proposing to determine that emissions from these three sources in New Hampshire will not contribute significantly to nonattainment in Massachusetts or Vermont. These three sources are all at least 85 km from any part of Maine, so EPA is also proposing to determine that emissions

²¹ The wind rose data are available in a memorandum to the docket for this action, which can be found on <http://www.regulations.gov>.

from these three sources in New Hampshire will not contribute significantly to nonattainment in Maine.

4. SIP-Approved Regulations Specific to SO₂

The State has provisions and regulations to limit SO₂ emissions. Notably, the New Hampshire Revised Statutes Annotated (RSA) section 125-O, “Multiple Pollutant Reduction Program,” requires the reduction of mercury emissions by at least 80% from baseline mercury input beginning in July 2013 at Merrimack Station in Bow, New Hampshire. This state requirement resulted in the installation and operation of a flue gas desulfurization (FGD) unit at Merrimack Station, and the removal of SO₂ occurs as a co-benefit of mercury removal with an FGD. New Hampshire permit TP-0008 contains enforceable conditions for the removal of SO₂ by the FDG, and this permit was approved into the SIP as part of the State’s Regional Haze SIP on August 22, 2012 (77 FR 50602). Additionally, New Hampshire issued permit TP-0189 in 2016 which incorporated a 7-boiler operating day average combined emission limit for Merrimack’s two utility boilers of 0.39 lb/MMBtu as enforceable conditions of the permit. EPA approved these conditions from this permit into the SIP on June 5, 2018 (83 FR 25922) as part of New Hampshire’s Nonattainment Plan for the Central New Hampshire Sulfur Dioxide Nonattainment Area.

The State has SIP-approved regulations limiting the sulfur content in fuel. The current federally-enforceable fuel specifications include limits on the sulfur content of liquid fuel (oil), gaseous fuel (natural and manufactured gas), and solid fuel (coal) purchased or used for heat or power generation. Current federally-enforceable limits on liquid fuel (oil) are 0.4% sulfur by weight for number 2 oil, 1.0% sulfur by weight for number 4 oil, and 2.0% sulfur by weight for numbers 5 and 6 oil and crude oil (except in Coos County where the limit is 2.2% sulfur by

weight). (As previously mentioned, a recent state law lowers these limits effective July 2018.) Limits on coal sulfur content include a maximum of 2.8 lb/MMBtu gross heat content for devices existing as of April 15, 1970, or 1.5 lb/MMBtu gross heat content for sources placed in operation after that date. *See* 40 CFR 52.1520(c), “EPA-Approved New Hampshire Regulations.”

5. Other SIP-Approved or Federally-Enforceable Regulations

In addition to the State’s SIP-approved regulations, EPA observes that facilities in New Hampshire are also subject to the federal requirements contained in regulations such as the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. This regulation limits acid gases, and effectively also reduces SO₂ emissions.

6. Conclusion

As discussed in more detail above, EPA has considered the following information in evaluating the State’s satisfaction of the requirements of prong 1 of CAA section 110(a)(2)(D)(i)(I):

- (1) EPA has not identified any current air quality problems in nearby areas in the adjacent states (Maine, Massachusetts, and Vermont) relative to the 2010 SO₂ NAAQS based on emissions trends or ambient monitoring data;
- (2) New Hampshire demonstrated using air dispersion modeling that permitted emissions from its three largest stationary source SO₂ emitters, in combination with other nearby sources and background SO₂ concentrations, are not expected to cause SO₂ air quality violations in other states relative to the 2010 SO₂ NAAQS;

- (3) consideration of available information on the only other major sources within 50 km of another state indicates that these sources are unlikely to contribute to NAAQS violations in other nearby states; and
- (4) current SIP provisions and other federal programs will effectively limit SO₂ emissions from sources within New Hampshire.

Based on the analysis provided by the State in its SIP submission and based on each of the factors listed above, EPA proposes to find that sources and other emissions activity within the State will not contribute significantly to nonattainment of the 2010 primary SO₂ NAAQS in any other state.

D. Prong 2 Analysis—Interference with Maintenance of the NAAQS

Prong 2 of the good neighbor provision requires state implementation plans to prohibit emissions that will interfere with maintenance of a NAAQS in another state.

Given our proposed conclusion that sources within New Hampshire are not contributing significantly to NAAQS violations in adjacent states because there are no NAAQS violations in the adjacent states, based on the consideration of the factors discussed earlier, EPA believes that a reasonable investigation as to whether sources or emissions activity originating within New Hampshire may interfere with its neighboring states' ability to maintain the NAAQS consists of evaluating whether emissions of sources in New Hampshire and the adjacent states are effectively prevented from increasing in the future.

The State's SIP submittal provides statewide SO₂ emissions trends for multiple source categories. EPA reviewed 2005 and 2014 NEI data to confirm the State's assessment of trends, and these values are summarized below in Table 10. EPA also considered emissions trend information from the states neighboring New Hampshire, as presented in Table 11.

Table 10: SO₂ Emissions in Tons Per Year (tpy) and Percent Change in Emissions between 2005 and 2014 for New Hampshire by Source Category

Data Category*	2005	2014	Percent Change in Emissions
Non-electric generating unit point sources	5,571	2,230	-60%
Electric generating unit point sources	51,461	2,642	-95%
Nonpoint sources	4,275	3,296	-23%
Nonroad mobile sources	819	257	-69%
Onroad mobile sources	630	134	-79%
Total	62,757	8,558	-86%

* Excludes emissions from wild fires.

Table 11: SO₂ emissions trends from 2002 to 2014 for states neighboring New Hampshire, in tons per year

State	2002	2005	2008	2011	2014	SO₂ emissions change, 2002-2014
Maine	33,585	32,114	23,386	15,555	11,276	-66%
Massachusetts	156,778	144,140	76,263	51,372	18,904	-88%
Vermont	4,988	4,682	4,052	3,449	1,511	-70%

Data retrieved from the 2002, 2005, 2008, 2011, and 2014 NEI datasets.

The data show statewide SO₂ emissions have decreased substantially over time. This trend of decreasing SO₂ emissions does not by itself demonstrate that areas in New Hampshire and neighboring states will not have issues maintaining the 2010 SO₂ NAAQS. However, as a piece of this weight of evidence analysis for prong 2, it provides further indication (when considered alongside low monitor values in neighboring states) that such maintenance issues are unlikely. Since actual SO₂ emissions from sources in New Hampshire have decreased overall between 2005 and 2014, because these decreases are substantial in every source category, and because these decreases are largely the result of state regulatory actions, EPA does not expect current or future emissions from New Hampshire to interfere with neighboring states' ability to maintain the 2010 SO₂ NAAQS.

SO₂ emissions from point and nonpoint sources combusting fuel oil in New Hampshire will not increase to historical levels and in fact will be lower due to a provision of state law, RSA 125 C:10- d. As of July 2018, fuel oil sold in the State is subject to stricter fuel sulfur limits, and New Hampshire plans to incorporate these limits into the state regulations Env-1600, entitled “Fuel Specifications.” The state law limits the sulfur content in fuel to 0.0015% by weight for number 2 home heating oil, 0.25% by weight for number 4 oil, and 0.5% by weight for number 5 and 6 oils as of July 1, 2018. These limits decrease current SO₂ emissions from point or nonpoint sources combusting fuel oil.

Lastly, any new large sources of SO₂ emissions will be addressed by New Hampshire’s SIP-approved new source review (NSR) and prevention of significant deterioration (PSD) program. New minor sources of SO₂ emissions will be addressed by the State’s minor new source review permit program. The permitting regulations contained within these programs are expected to ensure that ambient concentrations of SO₂ in Maine, Massachusetts, and Vermont do not exceed the NAAQS as a result of new facility construction or modification of sources in New Hampshire. The State’s SIP-approved NSR and PSD programs are contained in Env-A 600, entitled “Statewide Permit System,” under sections 618 and 619, respectively, as approved in the Federal Register on September 25, 2015 (80 FR 57722). These regulations ensure that SO₂ emissions due to new facility construction or modifications at existing facilities will not adversely impact air quality in New Hampshire or in neighboring states.

In conclusion, for interstate transport prong 2, EPA has incorporated additional information into our evaluation of New Hampshire’s submission. In doing so, EPA reviewed information about emission trends in Maine, Massachusetts, and Vermont, as well as the technical information considered for interstate transport prong 1. We find that the combination of the

absence of current NAAQS violations in the neighboring states, the large distances between cross-state SO₂ sources, the downward trend in SO₂ emissions from New Hampshire and neighboring states, more stringent limits on fuel sulfur content, and state measures that prevent new facility construction or modification in New Hampshire from causing SO₂ exceedances in downwind states, indicates no interference with maintenance of the 2010 SO₂ NAAQS from New Hampshire. Accordingly, we propose to determine that New Hampshire SO₂ emission sources will not interfere with maintenance of the 2010 SO₂ NAAQS in any other state, per the requirements of CAA section 110(a)(2)(D)(i)(I).

V. Proposed Action

In light of the above analyses, EPA is proposing to approve New Hampshire's June 16, 2017 infrastructure submittal for the 2010 SO₂ NAAQS as it pertains to section 110(a)(2)(D)(i)(I) of the CAA. EPA is soliciting public comments on the issues discussed in this notice or on other relevant matters. These comments will be considered before taking final action. Interested parties may participate in the Federal rulemaking procedure by submitting written comments to this proposed rule by following the instructions listed in the **ADDRESSES** section of this **Federal Register**.

VI. Incorporation by Reference

In this rule, EPA is proposing to include in a final EPA rule regulatory text that includes incorporation by reference. In accordance with requirements of 1 CFR 51.5, EPA is proposing to incorporate by reference New Hampshire's June 16, 2017 SIP submittal, entitled "Amendment to New Hampshire 2010 Sulfur Dioxide NAAQS Infrastructure SIP to Address the Good Neighbor Requirements of Clean Air Act Section 110(a)(2)(D)(i)(I)," described in section II of this preamble. EPA has made, and will continue to make, this document generally available

electronically through <http://www.regulations.gov> and at the EPA Region 1 Office (please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section of this preamble for more information).

VII. Statutory and Executive Order Reviews

Under the Clean Air Act, the Administrator is required to approve a SIP submission that complies with the provisions of the Act and applicable Federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA's role is to approve state choices, provided that they meet the criteria of the Clean Air Act. Accordingly, this proposed action merely approves state law as meeting Federal requirements and does not impose additional requirements beyond those imposed by state law. For that reason, this proposed action:

- Is not a significant regulatory action subject to review by the Office of Management and Budget under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011);
- This action is not expected to be an Executive Order 13771 regulatory action because this action is not significant under Executive Order 12866.
- Does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 et seq.);
- Is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 et seq.);
- Does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Public Law 104-4);

- Does not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- Is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- Is not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the Clean Air Act; and
- Does not provide EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, the SIP is not approved to apply on any Indian reservation land or in any other area where EPA or an Indian tribe has demonstrated that a tribe has jurisdiction. In those areas of Indian country, the rule does not have tribal implications and will not impose substantial direct costs on tribal governments or preempt tribal law as specified by Executive Order 13175 (65 FR 67249, November 9, 2000).

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Incorporation by reference, Intergovernmental relations, Sulfur oxides.

Dated: September 20, 2018.

Alexandra Dunn,

Regional Administrator,
EPA Region 1.

